

erection baths and washhouses as a suitable fulfilment of their official purpose; and that the additional subscriptions necessary will be forthcoming.

Wigan.—The plans of the public hall, furnished by Mr. Lane, of Manchester, architect, have been approved of at a meeting on Tuesday in last week in the town-hall. The structure, it is calculated, will cost from 2,500*l.* to 3,000*l.* The site, it would appear, will be in King-street, measuring 783 square yards, with frontage of 53 feet, and depth to wall of grammar school 121 feet; cost about 500*l.* About 3,250 shares of 1*l.* each have already been taken, and 1,000 more are to be issued.—Plans for a new Independent Chapel at West Houghton have been prepared by Mr. Richard Aughton, jun. of Preston, builder, and approved of. That gentleman, says a local paper, was also the successful competitor for the contract? The chief stone was laid on Wednesday week. The site is adjacent to the old chapel, which is to be converted into a school-house. The new chapel will be in the Gothic style, and calculated to accommodate about 700 people, and will cost about 1,400*l.* towards which about 1,000*l.* have already been contributed.

Arbroath.—A number of improvements and alterations in various of the shops and premises in the High-street of this town have recently been made, including the clearing away of outside stairs, an old nuisance of a very general order in Scotland, though usually connected with the complete subdivision of houses for separate families so well carried out there.—The Episcopal congregation of Arbroath are talking of erecting a place of worship for themselves.—A correspondent of the *Arbroath Guide*, under the name of "Christopher Wren Tertius," has some jocular strictures on Church Architecture in Arbroath. "Free Ladyloan Church," he says, "boldly invites public observation with exactly that degree of modesty which we usually find in persons dressed out in garish cast-off finery. It has evidently been set down in its present site with the utmost precipitation, all unsuspecting of the mere possibility that the eminence on which it stands could ever become converted into the street of a town. The awkwardness of its situation strikingly contrasts with the tact evinced in the plan and collocation of the Roman Catholic chapel adjacent, which is as much superior to it in external appearance as it is palpably inferior to the Presbyterian chapel in its internal arrangements. The interior of Free Ladyloan certainly tends somewhat to mitigate the repugnance with which the outside can scarcely fail to inspire the beholder. If those unfortunates (a pretty large number, I reckon) who are exposed to the fire shot darted through the gaping western window on Sabbath afternoons are perfectly satisfied with their lot, it is not for us to grumble, or stir them up to discontent or sedition against their rulers: we only hope their ocular nerves are a little stronger than ours. If common report hold good, the church has acquired more *celat* from the mechanism of the precentor's desk than that displayed in the pulpit."

Inverness.—Operations for the erection of the new bridge have been commenced by Messrs. Hutchins and Co. who have opened the contract by walling off a large enclosure for the workmen.

Idmestriety, Angles.—The parish church having been restored, or rather rebuilt, was re-opened last week. The whole except the west and east walls was razed within 3 feet of the ground. A perpendicular window in the latter was restored, and this, with a stone arch dividing the nave from the chancel, and the stone work of the inner and outer doorways of the south porch, restored, are the only portions of the old church remaining. The roofs are open, stained, and varnished. The benches are open, and have moulded ends. The robing-room is a moulded and carved wooden inclosure, at the north-west angle of the nave, lighted by a window in the north wall. Mr. Henry Kennedy was the architect; and Mr. Ebeneser Thomas the contractor.

TRINITY-SCHOOL, READING.

This school and teacher's residence, now nearly completed, adjoins Trinity Church, Reading: it is intended for 100 children, and has an entrance-porch, class-room, and room for bonnets. The residence contains sitting-room, kitchen, and scullery, and three bedrooms. The whole of the buildings are of faced-flint with Bath stone dressings. The bell-turret, which also serves as a ventilator, is of oak, with a gilded cross for the termination. The school has an open timber roof, framed with curved braces, collar, &c. and covered with slates: it is lined with ashlar to the underside of windows. The porch is roofed with Bath stone, supported on stone ribs.

As will be seen, the style of the building is Early English. The expense, including fences and fittings, &c. complete for occupation, will be 900*l.* The architect is Mr. John Billing. Messrs. Wells, of Reading, are the builders.

REFERENCES.

- A School, 20 feet by 40 feet.
- B Class-room, 10 feet by 12 feet.
- C Sitting-room (Mistress), 12 feet by 15 feet.
- D Kitchen, 10 feet by 12 feet.
- E Scullery, 10 feet by 5 feet 9 inches.
- F Washing and Bonnets.
- H Porch.
- I W. C.
- K W. C. (Mistress)

EXCAVATIONS AND ANTIQUITIES ON THE VIA APPIA, ROME.*

The minister of public works, Signor Jacobini, induced by the discoveries of masterpieces of art, that had been made, from time to time, on the site of the Via Appia near Rome, determined to make methodical and scientifically conducted excavations on and adjoining to that road. Pius IX. approved of the project, and the works were begun in December, 1850, by some 150 labourers, at the fourth mile-stone from the Porta Capena, in the direction of Albano. . . . The first appearance on visiting the spot is nowise inviting,—newly turned up ground between dead walls, with wootherlines of stones between them, standing some centimeters above the level, and forming a kind of stone avenue—that is all. Yet this avenue, stretching away in a right line as far as the eye can reach, is somewhat striking. On approaching, however, the immediate scene of operation, every step adds to our astonishment. The uncovered graves, at first few, appear more and more, closer and closer, and at last seem even to cover one another, till they range thick together in the view, like houses in a street, and another Pompeii seems to be before us. . . . The present excavations include the level of the street and the monuments immediately adjoining—in all a regular breadth of 22 metres. Investigation beyond this limit is reserved for a later time. At first the fragments of sculpture were divided, when found, into two classes: those of any worth were placed in a neighbouring magazine for further investigations: the others were left on the spot. But subsequently a better system has been followed. Each monument, as laid open, is marked with a number, and every piece recognised as belonging to it was marked with the same mark. Then, when possible, a restoration of the whole monument is attempted with the remaining fragments. . . . The remains consist chiefly of three classes,—temples, tombs, and *nastria* (places for burning the dead),—the first and last more rare, the second innumerable. . . . Of the early times of the Republic mention should be made of the tombs with very well preserved capitals of various orders, the entablature and ornaments of excellent workmanship, generally in Peperin or Travertine stone, which were discovered at the base of the larger buildings. . . . A peculiar kind of tomb of this epoch is seen in those which are circular in plan, full of earth, and apparently terminated in a tumulus, on which trees were planted. Their style of construction, the size of the blocks, &c. call forcibly to mind the Etruscan type. Of the end of

* The following extracts from a letter from Rome, obligingly translated from the *Allgemeine Bauzeitung*, by Mr. C. C. Nelson, further elucidate the communication we recently published, from Mr. Tite.

the republic, the time of Augustine, and that of the decline, there are many remains. Some have several orders, and are encased with the most varied marble ornaments: others are constructed with the "opus reticulatum," and others betray the period of the decline in their construction and ornament. The entablature of a lofty building, in white marble, of especially excellent workmanship, was fortunately brought to light. So also, a round tomb has afforded admirable fragments of Greek marble, which lead to the expectation that the whole can be again perfectly restored. So much for the architectural remains, most of which are of value, at any rate for the history of the art, if they are not remarkable for their workmanship."

The letter then goes on to describe the statues, mostly draped and headless, which have been found in connection with the monuments which they adorned. Many of them have been held worthy of transport to the museum of the Vatican. Marble vessels, containing the ashes, and many altars in Greek style, sculptured with figures of men and animals in various forms, have also been found. The inscriptions on the base of the monuments are numerous, and afford a rich field of speculation for the lover of palaeography, to whom they present many novel combinations of characters. The characters of the old republican times, cut in Albano stone, betray the most archaic forms: they improve in later times, cut in *Travertine*; and in the latest period of the republic and the most favourable epoch of the arts are seen, correct and beautiful, engraved in marble, till they ultimately degenerate with the art in its decline.

Besides these funeral monuments, other objects connected with building have been brought to light. The villa of the *Quintilieri*, with its splendid entrance, the bases of the columns *in situ*, the shafts fallen down alongside; near it a nymphaeum, superior to any hitherto discovered among the remains of antiquity. The excavations as yet extend for a length of about three miles: it is proposed to continue them next to Monte Albano, then to the old town *Borilli*, which operations will altogether form a length of eleven miles. Fancy all this done, and all possible restorations made! It will be a school for antiquaries, historians, palaeographers, and artists, such as the Eternal City alone can produce!"

THEORY OF THE TIDES.

The paper signed "W. Adolph," which appeared in *THE BUILDER*, disputing the received opinion in all the text-books on the subject, calls forth observations on the asserted anomalies of the question. The diagram he gives represents the theory, but, of course, it is very exaggerated, because it would be impossible in a drawing to show the extreme delicacy of the tidal wave, compared to the size of the earth: it can only be imagined, not delineated: thus, assuming a globe the size of the dome of St. Paul's, with a diameter of 120 feet, as a model of the earth, and taking a tidal elevation of 20 feet, by a common rule of arithmetic this tidal wave would on such a scale occupy but a 27th part of the thickness of a bank-note (of 300 to the inch). This observation is made rather to show the considerate bounty of the Creator in making such an arrangement, because if the tidal elevations were of great amount, the best land next the rivers and much of the coast would be spoilt, useless, or inconvenienced. The objection to the difference of the action of the moon at St. Helena and at Land's End is founded on an erroneous idea, for "W. Adolph" appears to have overlooked causes produced by the centrifugal motion which, near the equator, raises the water 13 miles high; therefore, it must be expected that the common tidal wave cannot in such situations exhibit much effect.

This applies to "W. Adolph's" other objections to the torrid zone. A very conclusive account is given on the subject in question in Partington's *Natural and Experimental Philosophy*, pp. 393 and 394.

T. HIGGS.

* A lithographic view of the excavations accompanies the letter-press in the original.